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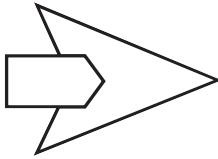
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EMERGING MARKET MULTINATIONALS AND THE THEORY OF THE MULTINATIONAL ENTERPRISE



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Does Dunning's OLI model really explain the pattern of foreign direct investments by emerging market multinationals (EMMs)? I argue that it suffers from the basic flaw of assuming that location advantages (CSAs) are properties of a country and freely available to all firms operating there. But some CSAs have owners, usually local firms, who can sometimes derive significant gains from the monopoly control of these resources. They can use this monopoly power to finance intangible-seeking investments in developed countries to obtain the firm-specific advantages (FSAs) they lack and, hence, compete with FSA-rich MNEs in their own market, and then internationally. Copyright © 2012 Strategic Management Society.

INTRODUCTION

In the last two decades, multinational firms based in emerging markets, the BRIC and VISTA countries of Brazil, Russia, India, China, Vietnam, Indonesia, South Africa, Turkey, and Argentina, as well as Mexico and Thailand, have started to invest abroad in competition with established multinational enterprises (MNEs) based in more affluent countries. As the number of these emerging market multinationals (EMMs) has risen, a major topic of discussion in the international business (IB) literature has been whether these investments represent a new phenomenon that requires new theories, or whether they can

be explained within the existing theoretical frameworks that have been used to explain their affluent country cousins, the established MNEs.

The OLI model (Dunning, 1988; Dunning and Lundan, 2008) is the paradigm most IB scholars have used when trying to make sense of the foreign investments of EMMs (e.g., Dunning, 2006; Narula, 2006; Rugman and Li, 2007; Lessard and Lucea, 2009; Rugman, 2009; Ramamurti, 2009). Some authors, for example Rugman and Li (2007), conclude that OLI demonstrates that the present foreign investments of EMMs are ill advised and that sustainable investments will have to wait until EMMs accumulate real firm-specific advantages (FSAs), such as cutting-edge technologies and strong brands. Others (e.g., Cuervo-Cazurra and Genc, 2008; Ramamurti, 2009; Lessard and Lucea, 2009) argue that the OLI model must be extended because EMMs possess unconventional types of FSAs not considered by the model.

Keywords: emerging market multinationals; MNE theory; OLI; transaction cost theory; bundling model

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While acknowledging that some EMMs have genuine FSAs they can exploit in foreign markets, I take a more radical view. I argue that the difficulty the OLI model has in explaining some of the foreign investments made by EMMs, specifically their intangible-seeking investments in developed countries, arises from a basic flaw in the model which, up to now, has not been generally acknowledged.¹ The OLI model states that firms expand across countries when the exploitation of their firm-specific advantages in a host country is most efficiently done in conjunction with host country resource endowments, such as natural resources, labor, market size, and institutions. These resources, which Dunning calls 'the locational advantages of countries' (Dunning, 1988) and Rugman and Verbeke (1990) call 'country-specific advantages' (CSAs), are assumed to be properties of countries, available to all firms operating there (Dunning, 1988). I argue that most CSAs are not freely available to foreign investors. Many, such as land, natural resources, labor, and distribution assets, are sold in imperfect markets, giving their local owners significant market power. This explains why some EMMs can compete with MNEs and generate the profits needed to acquire the FSAs they lack. Intangible-seeking foreign direct investments by EMMs can, thus, be understood as ways by which emerging market firms with preferential access to this subset of CSAs (which I will call complementary local resources) acquire abroad the complementary FSAs they lack to compete with foreign MNEs—first at home and then internationally.

In the next section, I show why intangible-seeking foreign direct investments by emerging market firms fit awkwardly into the OLI model because of its dual assumption that all foreign investments require the investing firm to have ownership advantages (FSAs) and that all CSAs are freely accessible. I show that most complementary local resources are not freely available to foreign MNEs. This leads to a bundling model (Hennart, 2009) where both intangibles (FSAs) and complementary local resources have transactional properties. Such a model creates a space for emerging market firms. I explain why these firms will seek to acquire intangibles and specify the conditions under which this search will lead to foreign direct investments. I then show how the control of complementary local resources by emerging market firms can provide them with the profits

needed to finance these foreign direct investments. I conclude with some suggestions for further research.

CAN OLI ACCOUNT FOR EMMs?

The OLI model attempts to explain 'the extent and pattern of value added by MNEs outside their national boundaries' (Dunning, 1988: 21). MNEs are firms that produce goods and services in foreign countries with their own employees, as opposed to firms that export to these countries or that license or franchise producers located there. Dunning lists three necessary and sufficient conditions for the existence of MNEs: firms create value added with their employees abroad when they have ownership advantages, location advantages, and internalization advantages.²

The first condition for a firm undertaking value-adding activities in a foreign country is that it possesses 'ownership advantages' (Dunning, 1988) or 'firm-specific advantages' (FSAs) for Rugman and Verbeke (1990). FSAs are property rights and intangible asset advantages, for example, new product and process technologies and strong brand names (Dunning and Lundan, 2008). Dunning notes that having FSAs is not a sufficient condition for owning value-adding operations abroad because the firm could exploit its FSA, for example a proprietary process, by integrating into production at home and exporting the products made with that process. A second condition is, therefore, that it is more desirable to locate production in a foreign country than at home. For this to be true, a country must offer location advantages that can persuade a firm to locate production there as opposed to at home. Location advantages (CSAs) consist of a country's endowment of natural resources, labor, and pool of customers, as well as investment incentives and disincentives, tariff and nontariff barriers, and institutions (Dunning and Lundan, 2008).

A firm can have FSAs and the target country CSAs, and yet it may decide not to establish value-adding activities in that country, preferring to license or franchise the exploitation of its FSA to a local firm. Therefore, a third condition for multinational production must be that it is more efficient for firms to exploit their FSAs through their own employees

¹ But see Hennart (2009) and Ramamurti (2009).

² This is why Dunning's model is called the OLI model. It is also called the eclectic paradigm because it merges internalization and location theories.

than through renting or selling the intangibles to independent foreign firms: this is what Dunning calls an 'internalization advantage.' Internalization advantages arise from imperfections in the international market for FSAs.

The OLI model makes an important distinction between O advantages (FSAs) and L advantages (CSAs). As their names imply, FSAs are specific to a firm and CSAs are specific to a country. In other words, while FSAs are proprietary to firms, CSAs are properties of a given country (its natural resources, market size, labor costs, etc.). Dunning and Lundan (2008: 96) write that CSAs are 'specific to a particular location . . . but available to all firms.' For Lessard and Lucea (2009: 283), CSAs are 'common to all firms located in a country.' Ramamurti (2009: 411–412) lists the CSAs of emerging countries as consisting of 'natural resource endowments,' 'low cost labor,' 'a large and rapidly growing home market,' and 'underdeveloped hard and soft infrastructure'—advantages and disadvantages that apply equally to all firms present in the country, both native and foreign owned.

The OLI model predicts that firms will make foreign direct investments when they have FSAs. However, authors looking at EMMs have pointed out that they do not seem to possess many FSAs. Rugman (2009: 61) echoes the views of many (e.g., Bonaglia, Goldstein, and Mathews, 2007; Mathews, 2002a; Ramamurti, 2009) when he states that 'there is little evidence that emerging economy MNEs have developed sustainable FSAs, especially the knowledge-based FSAs in systems integration and internal managerial coordination which are now important for the success of differentiated networks Western-type MNEs.'

Faced with this disconnect between the predictions of the OLI model and the empirical evidence of EMM foreign direct investments, IB scholars have taken three positions: some have invoked the OLI model to argue that emerging market firms will not be able to operate abroad successfully because they do not possess FSAs; their present foreign forays are a flash in the pan, ill advised, and condemned to be short lived; a second group of researchers note that the fact that EMMs do not have FSAs, yet expand abroad, shows that the OLI model cannot explain EMMs and should be replaced by theories that apply specifically to EMMs; a third group argues that emerging market firms may not have the traditional FSAs, but they do have new types of FSAs that allow them to expand abroad

and, in particular, to countries at the same or lower levels of development.

Rugman (2009) belongs to the first group. He notes that EMMs have not expanded abroad based on their FSAs, but instead based on their ready access to CSAs, oil and gas in Russia, minerals in Brazil, and cheap labor in India and China. These CSAs cannot provide a long-term basis for multinational activity because they are available to all firms. Discussing the case of Chinese EMMs, Rugman and Li (2007: 333) write:

'Basic theory suggests that multinational enterprises succeed when they develop knowledge-based capabilities, often called firm-specific advantages (FSAs). In China's case its large MNEs have few such knowledge based FSAs. Instead, they are building scale economies based on China's country-specific advantages (CSAs) in relatively cheap labor and natural resources . . . However there need to be more than economies of scale in the case of China's MNEs, as such scale advantages reflect a country factor available to all firms, rather than being an FSA.'

Lessard and Lucea (2009: 288) reach the same conclusion based on a slightly different argument:

'EMNEs [EMMs] that base their international competitive advantage on the basis of privileged access to natural resources or cheap unskilled labor are, almost by definition, non-sustainable: natural resources are finite and wage differentials with more advanced markets may narrow quickly as emerging markets develop.'

These authors conclude that because they do not have strong FSAs and so instead rely on CSAs, which are available to all firms located in the country including the subsidiaries of developed country MNEs, emerging market firms are unlikely to become multinationals until they acquire the necessary FSAs. Hence, Rugman's (2009: 53) prediction: 'When will China generate its own world-class MNEs? The answer is—not for 10 or 20 years.'

Mathews (2002a, 2002b, 2006a, 2006b) is the main proponent of the second position. He argues that Asian EMMs, which he calls Dragon Multinationals, 'help to expose the weaknesses and limits of traditional accounts of MNEs and of existing theories and frameworks of International Business' (Mathews, 2006a: 8) because, contrary to the predictions of OLI that MNEs venture abroad to exploit their FSAs, the Dragons have expanded abroad without such FSAs:

'Can we account for the success of these latecomers from the periphery, as they internationalize, in terms of a framework that emphasizes their prior resource wealth and their motivation to expand abroad to exploit this resource wealth in poorer and less well endowed markets? The answer is: No, we can't. To tackle the case of these latecomers from the periphery . . . we need a framework that emphasizes how resource-poor companies can utilize linkage and leverage to expand their operations . . .' (Mathews, 2006b: 154).

Mathews proposes such a framework, the LLL framework, in which the Dragon's international expansion is seen as a search for external resources that can be explained in terms of resource linkage, leverage, and learning. Mathews' model of FSA-poor EMMs making foreign investments to acquire FSAs has been rightly criticized for having one crucial flaw: it does not explain how firms that are going abroad to learn can, at the same time, successfully compete with their teachers (Lessard and Lucea, 2009; Ramamurti, 2009). There must be more to the story.

The third position is that EMMs do have FSAs, but these FSAs are somewhat different from those possessed by established MNEs in the U.S., Europe, and Japan. Zeng and Williamson (2007) and Williamson and Zeng (2009a), for example, show that some emerging market firms have developed process innovations that allow them to produce Western-type goods at lower cost and successfully sell them abroad. Cuervo-Cazurra and Genc (2008) argue that EMMs are better at understanding emerging market customers and at operating in countries with poorly developed institutional environments. These FSAs allow them to successfully compete in countries that have even less developed institutions than their own. Ramamurti (2009) and Lessard and Lucea (2009) take a similar tack, arguing that the local environment where EMMs operate gives them initial FSAs, which they reinforce later through their foreign investments.

While such FSA-exploiting foreign investments can be explained by OLI theory, two other types of EMM investment fit awkwardly into an OLI framework that posits that a firm needs intangible-based FSAs to expand abroad. First, just like developed country MNEs (Hennart, 2000), EMMs have invested abroad to acquire natural resources or components whenever they cannot be efficiently obtained through spot purchases or long-term contracts. They have also integrated into foreign sales

subsidiaries to support their exports whenever distribution services could not be efficiently obtained by contract. These investments are not motivated by the exploitation of intangible-based advantages.³ Second, EMMs have also invested in developed countries to acquire intangibles, setting up greenfield research laboratories and acquiring intangible-intensive firms. This type of investment is also difficult to reconcile with the OLI model since it is not motivated by FSA exploitation but by FSA acquisition.⁴ It is also unclear how firms without FSAs can successfully compete with MNEs and invest abroad at the same time. In this article, I provide a simple explanation for these intangible-seeking investments. I argue that, contrary to the assumption of the OLI model, an important subset of CSAs, complementary local resources, such as access to local customers, land, raw materials, labor, and so on, is not always available on competitive markets. The control that local firms have over such resources can provide them with the profits necessary to acquire intangibles through foreign direct investments. The likelihood of this scenario is especially high in emerging markets. To understand EMMs, one needs a model that does not privilege intangibles over complementary local resources but instead treats them in a fully parallel fashion.

THE COSTS OF ACCESSING COMPLEMENTARY LOCAL RESOURCES

In the rest of this article, I assume that developed country MNEs enter foreign countries to serve local customers. To do this, MNEs need to bundle their FSAs (cutting-edge technologies, strong brands) with complementary local resources such as land,

³ To account for these types of investment, Dunning added to his earlier intangible-based O advantages (asset advantages or O_a) a new category of O advantages called transactional advantages (or O_t advantages) 'which arise specifically from the multinationality of a company' (Dunning, 1981: 27). This, of course, is a purely tautological fix since it ends up predicting that a firm will internalize when there are benefits to internalizing. In the rest of the article, I ignore these O_t advantages and assume that all O advantages (or FSAs) are intangible based.

⁴ Dunning attempted to handle this problem by including in O_t or transactional advantages the 'competencies of the managers to identify, evaluate, and harness resources and capabilities from throughout the world' (Dunning, 2000: 168) (see also Narula 2012 in this issue). Since these competencies only become apparent after the firm has become an MNE, this is also tautological.

Tasks	Market imperfections
Knowledge of resources	Poor public information; network outsidership
Bargaining for resources	
Utilities	<i>Ex ante</i> and <i>ex post</i> monopoly
Land	Government monopoly
Natural resources	Government monopoly
Labor	Union monopoly
Customer access	<i>Ex post</i> monopoly; network outsidership
Enforcement	No or inefficient rule-based system; network outsidership

Figure 1. Imperfections in the markets for complementary local resources in emerging markets

utilities, employees, managers, access to suppliers, and access to final customers (Hennart, 2009). As we have seen, the OLI model assumes that these complementary local resources are sold on competitive markets and available to all firms, local and MNEs, on an equal footing. My point is that this is not always the case in developed countries and even less so in emerging markets.

The OLI model acknowledges the presence of market imperfections, but these are hypothesized to apply only to FSAs. Indeed, it is because FSAs cannot be sold on efficient markets that their owners must vertically integrate into the target country production of goods and services that incorporate these FSAs. In other words, imperfections cause markets for FSAs to be internalized within MNEs. This is the internalization condition of OLI. If FSA owners could license and franchise their FSAs to local owners of complementary resources at low transaction costs, they would not have to shoulder the high costs of integrating into production in a foreign country and there would be no foreign investment.

Given that OLI assumes that the transfer of FSAs between MNEs and local owners of complementary resources is subject to market imperfections, why shouldn't markets for complementary local resources also suffer from imperfections? Figure 1 lists the main complementary local resources that an MNE must access to exploit its FSAs into a host country and some of the problems with accessing them.

To access complementary local resources, one must know of their existence, location, and characteristics, contract for them, and enforce the transaction. All of these may involve significant costs to MNEs, and these costs may be particularly high in emerging markets. As noted in the IB literature, MNEs entering a country incur information costs because of their lack of familiarity with local conditions. Take, for example, customer acquisition. Large market size may be a location advantage (Dunning and Lundan, 2008) but to take advantage

of it, an MNE must be able to identify customers and secure their business. This requires understanding their needs and tastes—a greater challenge for foreign managers than for local entrepreneurs since the latter have, at least in part, acquired that skill as a by-product of being born there. The IB literature is replete with examples of MNEs failing to understand the needs of local customers (Ricks, 1983; de Mooij, 2010).⁵ Lenovo's crucial strategic move that established its dominance in the Chinese PC industry was to introduce computers with the latest technology ahead of IBM and other foreign vendors, and at the same price at which they sold their older technology (Xie and White, 2004; Sull and Wang, 2008). In developed countries foreign entrants can rely on market research companies for reliable data on customer tastes and purchase habits (in the case of business-to-consumer sales) and on public sources of information to identify potential customers and how to contact them (in the case of business-to-business sales). Such information is likely to be difficult to obtain in emerging markets because of the lack of independent market research firms and because much of the information useful for B-to-B sales is private information shared within local networks from which foreigners are excluded (Li, Park, and Li, 2004).

Assuming that foreign entrants have successfully identified the resources they need and who controls them, they have to negotiate access. Access to resources is easier if there is a competitive market for the services of these resources or for the firms in which these resources are embedded, since competitive markets reduce bargaining costs, reveal information, and protect against holdup (Hennart, 1982). In

⁵ One potential solution is for MNEs to use local managers, but these managers may experience difficulties persuading headquarters to make the necessary marketing mix adaptations (Birkinshaw and Ridderstrale, 1999) as this only shifts the cultural divide from the subsidiary level (expatriate manager versus locals) to the headquarters level (local subsidiary manager versus the corporate staff).

contrast to the assumption of OLI, the market for many complementary local resources is often monopolistic, exposing MNEs to holdup. In countries that have adopted Roman law, the State claims ownership of subsoil resources and has a monopoly of mineral deposits. In some countries, government authorities have title to all of a country's land. In most countries, they enjoy a monopoly in the provision and sale of products and services that range from public defense, health, and transportation services to tobacco and alcoholic beverages and are the sole buyer of the inputs needed for their supply: they often use this monopoly power to benefit local firms to the detriment of foreigners (Hennart, 1982; Zaheer, 1995). Economies of scale in the provision of utilities often lead to local monopolies. The likelihood of a competitive market for complementary local resources is smaller in emerging markets due to the greater role played by governments there.

Relying on monopolistic suppliers or customers is particularly dangerous for MNEs that have to make specific investments. MNEs exploiting mineral deposits under license from a host state often have to make immobile investments that grow in size as exploitation proceeds. This makes it possible for the State to hold them up, a phenomenon Vernon (1971) has called the *obsolescing bargain*. The inability of foreign mining firms to have clear title to a crucial complementary local resource (the mineral deposit) they need to exploit their FSA (typically their superior technology and project management skills) makes such investments very risky.

A similar situation occurs in distribution and explains why MNEs are sometimes unable to line up independent distributors. When consumers require significant help in choosing or using products and in having them demonstrated and repaired, local distributors may have to make significant intellectual investments in getting to know customers and products and substantial physical ones in repair facilities, spare parts, and so forth. Distributors will hesitate to make such investments if they are manufacturer-specific, that is if their value is much lower when used in conjunction with manufacturers other than the present one (for example, because the product has no close substitutes or uses a proprietary technology). In that case, distributors would incur losses if they were to stop working with their present manufacturers and they are, therefore, vulnerable to being held up by them. To protect themselves, distributors will ask manufacturers to promise to keep doing business with them for a specified length of time and

under specified conditions, for example by signing a long-term exclusive distribution contract. Without such assurances, distributors may refuse to make the necessary investments and manufacturers will have to arrange their own distribution (Williamson, 1985). Consequently, when distribution requires highly specific human or capital assets, distributors will be either tied to manufacturers by contract or owned by them. This means that MNEs entering a foreign market and eager to line up distribution will often find that there is no market for it, as the best distribution assets are already owned by local manufacturers or are contractually tied to them.

Alternative solutions then are either to build a distribution system from scratch, if allowed, or to acquire local firms that own the needed distribution assets. Here, again, foreign entrants may experience difficulties, as governments and the public often object to acquisitions of domestic firms by foreigners. The situation is worse in emerging markets because the number of potential acquisition targets is smaller given the prevalence of government and semipublic firms and firms tied to business groups (Khanna and Yafez, 2007). Because of inefficient domestic markets, emerging market firms also tend to be more vertically integrated. For example, the Weiqiao Group, the largest textile company in China, grows its own cotton, from which it makes yarn that it dyes and weaves into textiles. It has its own electricity plant to power its operations and refines aluminum to use the excess electricity. As Fan *et al.* (2007: 5) note, 'Weiqiao exemplifies a degree of vertical integration that is a commonplace Chinese phenomenon.' Similarly, Mexico's Grupo Elektra has integrated vertically into banking to facilitate its appliance sales (Bhattacharya and Michael, 2008). The greater degree of vertical integration makes emerging market firms more costly to acquire because the acquirer has to incur the cost of getting rid of the unwanted parts.

Holdup problems can potentially be alleviated by signing contracts or selecting honest partners. Foreign entrants may, however, experience high costs in enforcing trades because they have difficulty finding good partners, may not understand local laws and regulations, and are sometimes victims of discrimination by government agencies and courts. These problems are more severe in emerging than in developed markets because third party enforcement is less efficient there (courts, if they exist, may be slow and corrupt); independent credit bureaus are not available to check credit risk; and that risk cannot

be shifted to banks through factoring (Khanna and Palepu, 2010). Because they are outsiders, foreign entrants cannot benefit from the enforcement properties of the closed networks that are common in such countries (Yang, 2002).

In short, one should not assume that access to all complementary local resources is always available to MNEs on efficient markets. In the next sections, I investigate how this fact helps explain the type of foreign direct investments undertaken by EMMs and why EMMs are in a position to make them.

THE BUNDLING MODEL OF FOREIGN MARKET ENTRY AND EXPANSION

What happens when we drop the OLI assumption that MNEs can access all complementary local resources on efficient markets? Figure 2 presents Hennart's (2009) bundling model, which sets out the optimal way in which an MNE seeking to exploit its intangibles in the target market by selling to local customers, on the one hand, and local owners of complementary local resources in the host country, on the other, combine these assets to provide products to customers in a host country. The model determines which party will own equity. Since equity determines footprint, it also predicts the relative footprint of MNEs and local firms in the target market, that is whether MNEs will operate with fully or partly owned affiliates, or will not have affiliates there at all, in which case economic activity will be the exclusive purview of local firms. The model differs from OLI insofar as it assumes that complementary local resources have transactional properties just like the FSAs that the MNE wants to exploit

in the target market. The columns give the transactional characteristics of the intangibles the foreign investor wants to exploit, while the rows give the level of market transaction costs incurred in the transfer of complementary local resources to owners of intangibles. For simplicity, I assume that knowledge is the intangible asset the foreign entrant wants to exploit in the target market and that its transfer to the owner of complementary local resources can either incur (1) low transaction costs because it is sold on relatively efficient markets or is available for free or (2) high transaction costs. Note that whether the transfer of knowledge entails low or high transaction costs is a different issue than its appropriability by its owner: knowledge incurs low market transaction costs when it is easy to license and easy to steal. I will deal with appropriability later. Assume also that there is only one complementary local resource, access to local customers, which can be had at either high or low transaction costs.

Cell 3 of Figure 2 corresponds to the traditional foreign direct investment case featured in the OLI model where an MNE enters the host country and operates there with a wholly owned affiliate, either a fully owned greenfield or a full acquisition. Figure 2 shows that this will occur in a very specific set of circumstances, that is when (1) local firms with privileged access to local customers incur high transaction costs in accessing the MNE's knowledge and (2) MNEs incur low transaction costs in accessing host country customers. Local firms will incur high transaction costs in accessing the MNE's knowledge when such knowledge is tacit and cannot be patented, yet cannot be appropriated through copying, and when it is very difficult or impossible to acquire the firm in which it is embedded. The cost to the

		Intangible held by MNE	
		Low market transaction costs	High market transaction costs
Complementary local resource held by local owner	Low market transaction costs	1. Indeterminate	3. MNE has full equity = wholly owned affiliate of the MNE
	High market transaction costs	2. Local firm has full equity = wholly owned operations of local firm	4. Joint venture between MNE and local firm

Adapted from Hennart (2009).

Figure 2. Optimal mode of foreign operation

foreign firm of accessing local customers will be low if there is an efficient market for the inputs necessary to build a distribution network (market researchers and salespeople), or for the services of market researchers and distributors, or for the firms performing this task.⁶ When local firms incur high cost in accessing the knowledge held by the MNE, while the MNE can efficiently access distribution, i.e., cell 3, the most efficient arrangement is to have the MNE take full equity through a wholly owned greenfield subsidiary or a full acquisition and build up its own distribution or contract with local firms for distribution services. This is because this arrangement minimizes the sum of the transfer costs incurred by both parties. The party who holds equity, i.e., who is paid for his/her efforts by receiving what is left after all cooperating parties have received a fixed payment, does not have to be monitored because that party captures the full benefit or bears the full cost of shirking. A party remunerated through a fixed payment has an incentive to cheat if his/her output is difficult to measure. Giving equity to the party whose performance is the hardest to measure, in this case the MNE, is the most efficient solution because it minimizes the sum of shirking by the MNE plus cheating by the local distributor and, thus, maximizes the rents from bundling these assets (Hennart, 2009).

In cell 2, the transfer of knowledge to the local distributor incurs low market transaction costs, but not that of distribution services to the MNE. The transaction costs of transferring knowledge to the distributor are low when knowledge is well protected by property rights and, hence, can be sold or rented on efficient markets (it has high appropriability) or when it can be easily copied (i.e. it has low appropriability). Knowledge has strong property rights when it can be embedded in: (1) machines or parts sold on the market for products; (2) patents and

trademarks that can be efficiently licensed or franchised; (3) individuals who can sell their labor on the market for labor services; and/or (4) firms that can be efficiently purchased on the market for firms. When knowledge transfer incurs low transaction costs but access to distribution incurs high transaction costs, it is efficient to give equity to the party with the harder-to-transfer assets, i.e., to the firm that controls customer access. This will minimize total transfer costs. Hence, the optimal solution will be one where the local distributor acquires knowledge by copying it, developing it internally, or purchasing it on various international markets.

When the transfer of both knowledge and distribution incurs high transaction costs, it makes sense to give equity rights to both their owners. In that case, a knowledge owner who is given the right to equity would find it costly to monitor a distributor paid a fixed amount *ex ante*, and vice versa. Instead, it is efficient to have both parties self-monitor by giving each an equity claim. This is the typical market-entry equity joint venture with the MNE contributing its intangibles, typically tacit technological knowledge, and the host country firm contributing complementary local assets, typically local market knowledge and access to distribution and to political actors (Hennart, 1988).

This bundling model differs fundamentally from the traditional bargaining model in the political risk literature (e.g., Fagre and Wells, 1982). That literature argues that MNEs bargain with host country governments to be able to get full ownership of their foreign subsidiaries, suggesting that MNEs have a preference for equity. The bundling model argues instead that the optimal solution is to give equity to the party with the most difficult-to-sell inputs. A firm with difficult-to-sell intangibles will, thus, have to integrate into local production when the cost of transferring its intangibles to a local owner of complementary resources is higher than the cost of transferring the complementary local resources to the innovator. A firm that has developed intangibles may, however, be better off selling its intangibles to owners of complementary local resources in the main consumer countries if its intangibles can be sold on efficient markets while complementary resources are costly to acquire. For example, it is efficient for an innovating firm based in a small economy with a limited market for the products in which its inventions are embedded to sell itself to a foreign firm with established distribution networks if international equity markets are more efficient

⁶ As the previous example shows, it is important to keep in mind that the bundling of intangibles and complementary resources can potentially take place in three different markets—the market for assets, the market for the services of assets, and the market for firms in which the assets are embedded—and that these three markets are potential substitutes (Hennart, 2009). For example, knowledge can be embedded in intellectual or physical assets, a patent or a machine, which can be sold in the market for assets; in patents which can be rented in the market for licenses; and in firms which can be acquired on equity markets. Likewise, an MNE that needs to access local customers can contract for the services of distributors, hire salespeople, or buy on equity markets distribution companies or manufacturing firms with distribution networks.

than the markets for the foreign complementary assets necessary to distribute its products in foreign countries.⁷

The bundling model has a number of important implications for the theory of the MNE and for EMMs in particular. First, it makes clear that the OLI model, being based on the peculiar assumption that complementary local resources are always available on competitive host country markets (i.e., that they are always in the top row of Figure 2), gives a limited view of the interaction between foreign and host country firms. OLI focuses on the columns of Figure 2, but neglects the rows. This neglect of the rows also characterizes the extant theory of the MNE which explains why firms own operations abroad by looking only at the level of transaction costs in the international market for knowledge (e.g., Arora and Fosfuri, 2000; Davidson and McFetridge, 1984; Rugman, 1981). In this MNE-centric view, the choice between fully owned MNE affiliates and joint ventures with local firms depends solely on the MNE's level of commitment to the foreign market (Anderson and Gatignon, 1986; Johanson and Vahlne, 1977). Figure 2 shows that we also need to take into consideration the transactional properties of complementary local resources because when they are difficult to transfer to FSA owners, the optimal configuration will be one where local owners of complementary local resources will either keep full equity and obtain the complementary intangibles on global markets (cell 2) or share equity with their owners and obtain access through joint ventures in the host country (cell 4).

Figure 2 shows that the survival and profitability of MNE subsidiaries in emerging markets hinges on their ability to access complementary local resources, while that of emerging market firms depends on their ability to efficiently and cheaply access intangibles. At this point, two questions remain unanswered: first, when will the local firm's quest for intangibles result in foreign direct investments? Second, if local firms need to access intangibles, how do they manage to do it while competing in their own turf with intangible-rich MNE subsidiaries?

⁷ Aharoni (2009: 379) bemoans the fact that many high-tech Israeli companies sell themselves to large U.S. firms rather than follow 'the torturous road leading to becoming a large MNE themselves,' but this is what the bundling model predicts is the most efficient solution for both group of firms, although not necessarily for the home country.

FOREIGN DIRECT INVESTMENT BY EMMs

We have seen that in some cases foreign entrants will find that access to complementary local resources entails high costs and that it will then be optimal for both parties to give local firms full or partial equity claims. There are then two possibilities, depending on the transactional structure of intangibles: if intangibles have high transfer costs, their owners will combine their assets in a joint venture in the host market (cell 4); if intangibles have low transfer costs, emerging market firms will either appropriate them at no cost or purchase them on efficient international markets and will keep the whole equity (cell 2). In this latter case, the transfer of intangibles from developed country firms to emerging market firms will take place in the markets for assets, services of assets, or firms incorporating the assets and will be optimal for both parties.

When will that transfer lead to foreign direct investment and, hence, to the emergence of EMMs? A multinational firm is a firm that has employees abroad. Hence, we need to investigate the specific circumstances under which an owner of complementary local assets will acquire intangibles by having employees in foreign locations. To keep things simple, I continue to omit reputation and focus on knowledge.

Figure 3 shows the many ways in which knowledge can be acquired. It indicates that knowledge-seeking foreign direct investment will be used when two conditions are simultaneously met: (1) knowledge is most efficiently acquired through employment contracts and (2) employees are located abroad.

Knowledge is often mobile and its acquisition does not require a foreign presence. First, home country returnees may bring back knowledge acquired abroad (*The Economist*, 2011a). A significant amount of business and technical knowledge is not protected by patents and can be accessed free of charge from a foreign location. Foreign products can be copied through reverse engineering. Technology necessary to manufacture a product is sometimes fully embedded in machines that can be purchased from foreign sellers, who will typically train buyers in their use (Mathews, 2002a). Knowledge is also embedded in parts and components and by buying components, assemblers of modularized products such as PCs and mobile phones can access up-to-date technology and incorporate it into products sold

		Knowledge is embedded in			
		Assets	Services of assets	People	Firms
Mobility	High	1. Components Machines Patents Trademarks	2. Licensing Franchising Management contracts Consultants OEM	3. Migrants/returnees Consultants Foreign employees	4. Home-based equity joint venture
	Low				5. Full or partial acquisition/merger of foreign firm Foreign-based greenfield subsidiary (wholly owned or joint venture)

Figure 3. Modes of technology acquisition

to final users. Technology services are also mobile: some types of knowledge, such as formulae for chemicals and pharmaceuticals, are embedded in patents, which can sometimes be efficiently accessed through licensing contracts (Arora, Fosfuri, and Gambardella, 2001; Hennart, 1982; Levin *et al.*, 1987; Teece, 1986). Knowledge embedded in foreign patents is sometimes explicit enough—and patent enforcement in emerging markets weak enough—that it can be obtained by reading them. Tacit knowledge embedded in firms can also be accessed across borders through technical assistance agreements. Much of the technology in the chemical and petroleum industries is held by specialist firms that sell their services on the open market (Arora and Gambardella, 1998). Foreign professionals and professional service firms can also be tapped for managerial and marketing advice, while tacit marketing knowledge can be acquired through OEM contracts (Child and Rodrigues, 2005). These forms of technology acquisition do not result in foreign direct investment and, hence, do not make their acquirer a multinational firm.

For access to knowledge to result in a foreign direct investment, there must be an extension of the firm abroad (an employment relationship) and employees must be located in a foreign country.⁸ It makes sense to employ workers in foreign locations

(cell 5 in Figure 3) when their productivity is higher there than in a home location. One reason might be the availability of knowledge spillovers. Local owners of complementary resources may access foreign knowledge by buying firms located in a technology-rich country or by setting up a greenfield subsidiary in that foreign country. Buying full or partial equity in existing firms will be preferred to other modes of knowledge acquisition when one needs a complete set of capabilities (Deng, 2007; Rui and Yip, 2008) and when the desired parts of the acquired firm can be separated from the unwanted ones, i.e., if the potential target is digestible (Hennart and Reddy, 1997). Many developed countries have efficient equity markets where firms can be bought. Firms in these countries are often specialized or, if diversified, divisionalized, making it relatively easy to buy only the desired part or to sell off the unwanted parts post-acquisition. Hence, Huawei, after it had obtained a dominant position in the Chinese domestic market, acquired expertise in optical network technologies through its acquisition of a small high-tech U.S. firm, OptiMight (Zeng and Williamson, 2007). Suzlon gained knowledge on the manufacturing of wind turbines gearboxes and drive trains through the acquisition of the Belgian firm Hansen Transmission International (Awate, Larsen, and Mudambi, 2012). Local owners of complementary resources in search of complementary knowledge may also set up greenfield R&D subsidiaries in foreign locations where experienced personnel can be hired. Haier, for example, has established an R&D subsidiary close to Ericsson's headquarters in

⁸ Employment relationships do not necessarily result in foreign direct investment since employees are sometimes mobile and foreign employees can be hired to work at the headquarters of emerging market firms.

Stockholm to tap the talent available there (Zeng and Williamson, 2007). So just as the possession of intangibles by MNEs does not necessarily lead to foreign direct investment because some of the intangibles can be exploited by licensing or franchising local firms or can be appropriated for free by them, it is only in specific circumstances that the search for technology by local owners of complementary resources will result in foreign direct investments.

We can now return to the difference between cell 2 and cell 4 of Figure 2. Cell 2 corresponds to the case where access to intangibles incurs low transaction costs and cell 4 where it entails high transaction costs. This could be because knowledge is embedded in firms, but the cost of acquiring them is high, because (1) the governments of the countries where the firms are located block acquisitions by emerging market firms; (2) the acquisition target is difficult to digest because the knowledge that is sought by the purchaser is tightly linked to other unneeded assets (Hennart, 2009); or (3) the emerging market firm may lack the resources and the management skills to carry out foreign acquisitions or foreign greenfield investments. In those cases, the most efficient solution will be an equity joint venture where the emerging market firm brings access to complementary local assets, such as distribution or natural resources, while the foreign firm contributes its proprietary knowledge. These equity joint ventures will be located in emerging markets and, hence, will not be recorded as EMM foreign direct investments.

HOW EMERGING MARKET FIRMS FINANCE THEIR INTANGIBLE-SEEKING FOREIGN INVESTMENTS

The idea that EMMs make foreign investments to source intangibles is by now well established (e.g., Child and Rodrigues, 2005; Deng, 2007; Rui and Yip, 2008). What remains a puzzle is how EMMs, which most observers agree did not start with cutting-edge FSAs and which are often fiercely competing with FSA-rich MNEs in their home market, can marshal the resources necessary to acquire the FSAs they need.

The answer is that some emerging market firms obtain these resources from their control of complementary local resources. Emerging market firms are sometimes in a position to directly barter market

access for technology. Their bargaining power also allows them to capture the bulk of the profits earned from putting together the local resources-intangibles bundle, and these profits can then be used to purchase the intangibles needed to catch up.

To make that point, I first introduce a simple model that predicts the relative bargaining power of local owners of complementary local resources versus foreign owners of intangibles. I argue that relative bargaining power determines the share of the rents earned from their joint contribution (what I will call the bundle). I then explain why some emerging market owners of complementary local resources enjoy some measure of market power and why, in contrast, the bargaining power of technology sellers is often overestimated.

In Figure 2, I have shown which party, the MNE or the local owner of complementary resources, should own the equity. If it is optimal to vest equity in the MNE, that firm will extend its footprint by setting up wholly or partly owned affiliates in the host country. If, however, it is optimal to give equity to the local firm, that firm may, in some cases, extend its footprint abroad by acquiring foreign firms or setting up foreign greenfield subsidiaries. Figure 2, however, does not tell us how the gains of putting together the local assets-foreign assets bundle will be shared between the MNE and the local firm. For example, cell 2, where owners of local complementary resources have full equity, covers two very different situations: (1) one where these owners can obtain the foreign firm's intangible for free by copying it and, hence, capture all of the gains of the bundle; and (2) another where owners of intangibles can sell them on efficient markets, for example through the sale of machinery or components that are difficult to imitate. If the machinery or the component has few substitutes, its manufacturer will capture most of the value of the bundle. For example, a significant part of the total value of a laptop is captured by Intel and Microsoft because these two firms have strong bargaining power vis-a-vis laptop assemblers: Intel's chips are difficult to duplicate and can be sold to laptop assemblers on efficient markets, while Microsoft has effectively locked out competition from other software providers through first-mover advantages. Yet those two firms have no equity in laptop assembly plants. The market for laptop assembly (but not its distribution) is competitive, yielding what Stan Shih of Acer has called the smiling curve of profitability in the PC industry. As these examples show, the apportionment of equity

		Intangible held by technology owner	
		Weak bargaining power (many substitutes)	Strong bargaining power (few substitutes)
Complementary local resource held by local firm	Weak bargaining power (many substitutes)	1. Consumers capture most of the value of the bundle	3. Technology owner captures most of the value of the bundle
	Strong bargaining power (few substitutes)	2. Local firm captures most of the value of the bundle	4. Technology owner and local firm share the value of the bundle

Figure 4. Who captures the value from the bundle?

has no direct influence on the distribution of the gains from the intangible-complementary local resources bundle, which depends on the relative bargaining power of the parties.

Figure 4, adapted from Ceccagnoli and Rothermael (2008), shows how the division of the rents from the local assets-technology bundle between consumers, local owners of complementary assets, and intangible owners depends on the relative bargaining power of the parties. Here again I focus on technology to keep things simple. The columns indicate the bargaining power of the technology owner. That bargaining power is high when the technology has few substitutes. This, in turn, hinges on the height of the barriers to imitation. They are high when intellectual property laws create a legal monopoly for the technology owner or when the characteristics of the technology make it costly for others to duplicate the product in which it is embedded. The rows describe the bargaining power of the local owner of complementary resources. Cell 3 in Figure 4 corresponds to the case where technology owners have strong bargaining power while owners of complementary local resources have weak bargaining power because these complementary resources are supplied on competitive markets. Then technology sellers capture most of the rents created by the bundle. But as Figure 4 shows, this is only one of four possible cases. If technology owners have weak bargaining power because technology is easy to copy or because it is sold on competitive markets, while the supply of complementary local resources is monopolized by a single owner, that owner will capture most of the value of the bundle (cell 2). This is the case, for instance, when a host country firm

controls access to rare and valuable resources such as customers. When both the owners of technology and of complementary local resources have strong bargaining power, they will more equally share the gains from the bundle (cell 4).

The outcome of this bargaining game should vary across industries and countries. I argue in the next sections that there are many reasons to believe that in emerging markets the bargaining power of owners of complementary local resources will be higher, and that of technology owners lower, than in developed markets. Local firms in emerging markets may, therefore, often be able to capture most of the rents from the bundle, giving them the wherewithal to acquire the technology they need through foreign direct investment and other means.

Knowledge resources in emerging markets

There are many reasons to believe that the bargaining power of owners of knowledge is weaker than generally thought. The task facing emerging market owners of complementary local resources is to match the technology of their MNE competitors. As Awate *et al.* (2012) persuasively show, catching up does not require the broad and deep knowledge base that is needed to innovate. Imitators do not have to endure the costly trial and error process of innovators and can directly opt for proven technologies. They can more readily leapfrog to new technologies because, unlike their established rivals, they do not have sunk investments in old technologies. Mittal Steel, then called Ispat, was able to purchase from specialist suppliers plants using the direct reduced iron technique, a cutting-edge and cost effective steel

technology that incumbent firms had been slow to adopt because it was incompatible with the plants they already had (Mathews, 2002a). Unencumbered with preconceived ideas and not having to worry about cannibalizing existing sales, emerging market firms often come up with products that are more cost effective than those of their MNE competitors (Williamson and Zeng, 2009b).

As argued earlier, the bargaining power of knowledge owners vis-a-vis that of owners of complementary local resources depends on the number of feasible suppliers of similar technology. The larger that number, the lower their bargaining power. Hence, that bargaining power is high if intellectual property laws give technology owners a monopoly in its use and low if owners of complementary local resources can easily infringe on patents and duplicate products without penalty. Even in developed economies, a significant part of the knowledge used by established MNEs, such as their business models, is not patentable and can be freely imitated. A number of entrepreneurs in China and India are returnees who have taken back with them their knowledge of Western business practices and technology (*The Economist*, 2011a). Robin Li and Eric Xu, the two founders of Baidu, China's leading search engine, and both returnees from the U.S., established Baidu's dominance by quickly copying the pay-for-performance advertising model pioneered by Overture, a U.S. company (Chen and Wu, 2009). Most emerging markets have weak regimes of intellectual property protection that make it possible for domestic firms to copy patents and reverse engineer products. This is the way Indian pharmaceutical firms and Chinese carmakers got established (Indu, 2005; *The Economist*, 2007; Feng, 2010).⁹

There is also a general consensus among observers that markets for technology are becoming more competitive, lowering the bargaining power of technology developers (Arora *et al.*, 2001; Williamson and Zeng, 2009b). Williamson and Zeng (2009b) point out that knowledge is becoming more codified and digitized, making its acquisition easier. Cutting-edge technology can be bought from specialist firms on the open market (Arora *et al.*, 2001). International experts and professional service firms compete to sell best practice in management, marketing, branding, logistics, accounting, and finance.

⁹ The copy of Daewoo's Matiz by the Chinese automaker Chery is so good that apparently the doors and the hood of the QQ fit the Matiz.

Pearl River Piano, the Chinese firm that is the world's largest piano maker, learned how to improve the quality of their pianos by hiring '... more than 10 world-class consultants to assist in improving every aspect of piano making, from design to production to final finish' (Zeng and Williamson, 2007: 52). Huawei, a major Chinese seller of telecommunication equipment, has contracted with IBM, the Hay Group, and PriceWaterhouseCoopers to help improve its management practices (Luo *et al.*, 2011). The rapid growth and improved living conditions of their economies are also allowing emerging market firms to hire and retain foreign employees and attract back their own nationals whose education and training has been subsidized by developed countries (Williamson and Zeng, 2009b).¹⁰

The modularization of the value chains of some industries is also facilitating technological catch-up (Zeng and Williamson, 2007). In computers and mobile phone handsets, for example, the final product is made up of components that fit together because all industry participants have agreed on a common interface. This means that an entrant does not need to master the technology of the whole system, but may specialize in only one component. As a result, there are generally many possible suppliers of a given component, and the latest technology can be obtained by emerging market firms by purchasing components and manufacturing equipment on competitive markets, allowing EMMs like Lenovo to incorporate the latest technology in their products at the same time as their MNE rivals (Xie and White, 2004; Luo, Sun, and Wang, 2011).

While all these modes of technology acquisition make it possible to acquire different types of capabilities and integrate them with the firm's existing ones, the acquisition of going firms offers the added plus of providing a complete set of technological, managerial, and marketing capabilities (Hennart, 2009; Rui and Yip, 2008). Acquiring knowledge through M&As is easier in developed markets than in emerging ones because the market for corporate control is relatively more open in developed countries, making even hostile acquisitions possible.

¹⁰ In 1999, 20 of the 85 member of Rambaxy's new drug development team were Indian expatriates (Verbeke, 2009). All of Tata Consulting Service's top managers have studied and worked abroad (*The Economist*, 2011a). As Narula (2012) points out, the success of Etihad, Emirates, and Qatar Airways shows that the technical, managerial, and organizational skills necessary to run airline companies can be acquired through the wholesale hiring of expatriate staff.

Firms in developed countries also tend to be more specialized, making it possible to acquire specific technological expertise. For example, China's SGSB Group, through its acquisition of German-based Duerkopp Adler, the world's third-largest industrial sewing machine company, was able to obtain cutting-edge technology, marketing experience, and a valued brand (Zeng and Williamson, 2007). Because large firms in developed markets are organized in divisions, EMMs can acquire the part of the firm they need without having to acquire all of it. Lenovo was able to purchase IBM's laptop division and its R&D center without having to buy all of IBM, and Grupo Bimbo could buy the North American Fresh Bakery unit of Sara Lee without having to buy Sara Lee's other U.S. businesses.

In short, weak intellectual property protection in emerging markets as well as greater competition in the supply of technology has significantly reduced the bargaining power of technology developers. Even if they have few competitors and hence some bargaining power in the market for technology services, the relative efficiency of the market for corporate control in developed countries gives technology buyers the option of purchasing them.

Complementary local resources in emerging markets

Owners of complementary local resources have high bargaining power when what they control has few alternatives. As we have seen, governments in most emerging markets own title to natural resources, and they have the monopoly of their sale. Many of them have used this power to build up national monopolists at the processing stage. The Brazilian government, for example, has given its national champion Vale the monopoly of Brazil's high-grade iron ore deposits and helped it become the sole exporter of Brazilian iron ore (Khanna, Musacchio, and Reisen de Pinho, 2010). Emerging market governments are often the sole suppliers of many goods and services and the sole buyers of the inputs required for their supply. This gives them strong bargaining power.

Governments in many emerging markets used protectionist policies to keep foreign firms out until the 1980s and 1990s (Ramamurti, 2009), with some of these restrictions being lifted only recently—China, for example, did not fully lift its restrictions on foreign ownership of distribution until 2004. This has allowed local firms to gain first-mover advantages (Lieberman and Montgomery, 1988). By offering

products more responsive to local tastes than those of their MNE competitors, as well as better service, some local firms like Haier and Lenovo have used that breathing space to gain customer loyalty and, hence, market power. In rural areas, Haier, China's largest manufacturer of white goods, is selling washing machines that can clean vegetables, and in Shanghai and other big cities where space is at a premium a line of small-sized machines that can wash a single change of clothes (Khanna and Palepu, 2010). Haier has also established its own service organization: customers can call a toll-free hotline with their service requests and within 24 hours they can expect a uniformed repairman to show up at their door with the necessary parts and tools. This high level of service has allowed Haier to differentiate itself from the competition and to charge prices that are even higher than those charged by some of its foreign competitors (Hexter and Woetzel, 2007).

Emerging market firms have also gained market power (and, hence, bargaining power vis-a-vis technology suppliers) through their preemption of scarce distribution assets. Grupo Bimbo, the world's largest bread maker (*McKinsey Quarterly*, 2011), established a dominant position in its Mexican home market through its extensive captive distribution system that delivers fresh bread daily to its customers (Ager, 1998).¹¹ This control of distribution has protected the firm against attacks by large MNEs such as Pepsi (Dawar and Frost, 1999). Haier set up distribution channels and after sales services to cover the whole of China while its foreign competitors typically targeted the east coast's large cities (Khanna and Palepu, 2006). It also built a captive logistics network that has allowed it to sell in the hinterland, an area closed to its foreign competitors because no independent distributors were available there. Likewise, most observers agree that Lenovo's control of distribution and superior knowledge of Chinese consumers and their changing tastes have allowed the company to successfully compete against its established rivals; and its first-mover advantage in setting up what is the largest and most efficient dealer network in the IT industry in China is hard to counter. Xie and White (2004: 418) note that 'Lenovo accumulated customer knowledge and created a distribution network that has proven nearly impossible for foreign and even most domestic

¹¹ In the late 1990s, Bimbo was using 14,000 trucks to make 420,000 daily deliveries to 350,000 clients (Ager, 1998).

competitors to replicate. It has continued with this strategy as it has extended its capabilities into manufacturing and R&D.' Chen *et al.* (2001: 5) add that '[Lenovo] has emerged as the dominant player in the Chinese PC market because of its huge distribution network. This network helped the company compete successfully against MNCs as well as local companies.'

One convenient way for MNEs to counter these first-mover advantages is to acquire the emerging market firms that own scarce distribution assets and have strong ties to customers. This option, however, is often hard to carry out in emerging countries. Government authorities in emerging markets often put restrictions on acquisitions of domestic firms by foreigners. As discussed earlier, the prevalence of government-owned firms and of firms linked to industrial groups reduces the number of potential targets, while the high level of diversification by emerging market firms is making their integration more difficult.

To sum up, the evidence shows that while suppliers of technology are operating in an increasingly competitive environment, many suppliers of complementary local services in emerging markets enjoy a monopoly in the supply of these services and hence are in strong bargaining positions vis-a-vis MNEs. They have used this strong position to (1) barter market access for technology within emerging-market-based alliances and joint ventures and (2) obtain a large share of the profits derived from the bundling of complementary local resources and technology and use these profits to finance in-house R&D and foreign direct investments.

Some emerging market firms have enlisted the help of their government to directly barter complementary local resources for technology within domestic alliances and joint ventures. According to Yu Weixang, the director of the Research Institute on International Trade and Cooperation of the Chinese Ministry of Foreign Economics and Trade, this policy has been applied to more than 80 percent of all direct foreign investments in China since 1987 (Mu and Lee, 2005). Mu and Lee (2005) describe how the Chinese government successfully persuaded the Bell Telephone Manufacturing Company to enter into a joint venture with Chinese firms and share its telephone switching technology in exchange for market access. Once the technology had diffused to Datang, ZTE, and Huawei, it gave the bulk of state infrastructure contracts to these firms, helping them establish themselves as global players. Similarly, the

prospects of selling equipment for the Chinese government's ambitious plan to build a 9,700-kilometer bullet train network by 2020 persuaded Alstom and Kawasaki to locate production facilities in China and help develop a local train components industry there.¹² Kawasaki helped China South Locomotive and Rolling Stock Industry (CSR) manufacture train sets in China, taking CSR engineers to Japan for training and providing additional technology to increase speed. The factory now produces about 200 train sets a year. The transfer of knowledge to Chinese firms has been so effective that Chinese companies are now building high-speed lines in Venezuela and Turkey and are bidding against their former teachers for Brazilian contracts (Shirouzu, 2010).

We would also expect emerging market owners of complementary local resources with strong bargaining power to be able to capture the bulk of the profits that accrue from bundling imported intangibles with complementary local resources. In the international petroleum industry, where deposits are owned by governments (or granted by them to the national oil company), crude oil production-sharing agreements end up allocating around three-fourths of the profits to the owners of the deposits (Bindemann, 1999). This has given these national oil companies considerable resources to undertake foreign investments. Likewise, emerging market firms that are in a strong bargaining position have obtained the financial resources needed to finance their technological catch up, including the purchase of Western and Japanese technology-intensive firms. Lenovo, for example, has used the profits derived from its dominance of the Chinese market to substantially increase its R&D investments (Xie and White, 2004) and acquire IBM's PC division and its two R&D laboratories.

CONCLUSION

Can existing theories of the multinational enterprise explain the rise of emerging market multinationals (EMMs)? Because Dunning's OLI model is the dominant model of the multinational enterprise in international business, much of the discussion has focused on whether it is up to that task or whether it should be modified. My contention is that the OLI

¹² While such pressures go against the rules of the WTO, which China joined in 2001, firms may still agree to them in order to get their foot in the door (*The Economist*, 2011b).

model is not suited to explain the emergence of EMMs because of its dichotomy between firm-specific advantages (FSAs), which are supposed to allow firms to invest abroad, and country specific advantages or CSAs, which are properties of the target country and which determine from which location the FSA-exploiting firm will serve the target country. In the OLI model, FSAs, such as technology and brand names, are seen as necessary and sufficient to successfully compete in foreign markets because all CSAs, including what I call complementary local resources, are deemed to be accessible on the same terms to all firms in a country, whether local or foreign.

It has increasingly become apparent that this particular way of looking at the prerequisites for foreign direct investment cannot explain why EMMs invest abroad since EMMs possess few of the technologies and brand names that OLI says are a condition for foreign direct investment. This has led to considerable effort to see whether EMMs may not have yet undiscovered and unusual types of FSAs that may make it possible for them to invest abroad (Cuervo-Cazurra and Genc, 2008; Guillen and Garcia-Canal, 2009).

At the same time a few scholars, Hennart (2009) and Ramamurti (2009) for instance, have openly questioned the OLI assumption that all CSAs are freely available to all firms in a host country. This article develops that intuition. It builds on Hennart's (2009) bundling model. That model argues that the profitable sale of any product or service in any given host market requires the bundling of intangibles such as technology and brand names with complementary local resources. These resources include the knowledge of how to incorporate these intangibles into products that meet the needs and tastes of local consumers, the logistics necessary to put products within their reach, and all the other inputs necessary for local production. I argue that, contrary to what OLI assumes, these complementary local resources are rarely sold on competitive markets. Especially in emerging markets, they are often monopolized by local firms. These firms, especially if, like Lenovo, they have started their life as distributors (Chen *et al.*, 2001), often have a better feel than foreign firms for the needs and tastes of local customers; they have typically built proprietary distribution networks not available to their foreign competitors; they often enjoy privileged access to natural resources; they also benefit from better access to local decision makers. This privileged access to complementary

local resources gives local firms some measure of market power, which allows them, in some cases, to (1) obtain free technology from MNEs in exchange for access to local customers and (2) capture the bulk of the rents that arise from bundling intangibles with complementary local resources. Local owners of complementary resources can then use these rents to access or acquire technology and reputation. This process will result in foreign direct investments whenever the sought-after intangibles are best accessed by making full or partial acquisitions of foreign firms and by setting fully or partly owned greenfield facilities abroad. Armed with these intangibles, these EMMs can successfully compete with MNEs in their home market and then increasingly worldwide, as shown, for example, in the case of Lenovo, Huawei, and Suzlon.

This is only a first pass at a very complex topic. To simplify the argument, I used the example of a foreign firm bundling its technology with a local firm's distribution services. The model is, however, quite general. It can be applied, for example, to the bundling of a foreign firm's technology with a local entity's control over mineral deposits. In that case, cell 2 in Figure 2 corresponds to state-owned companies (SOCs) of mineral-producing countries extracting minerals with the technical support of developed country consultants, cell 4 to joint ventures between SOCs and MNEs, and cell 3 to wholly owned operations of MNEs. In the oil industry, for example, MNEs experience high transaction costs accessing oil and gas deposits because they are usually monopolized by governments and it is difficult to obtain credible promises not to be held up. At the same time, there is a competitive market for oil exploration and production technology. With high transfer costs for mineral resources and low transfer costs for technology, one would expect cell 2 to be the dominant governance form. And indeed this is the case, with MNEs (the international oil companies) controlling less than 10 percent of the world's oil and gas resource base and SOCs accounting for an overwhelming share of world production and reserves (Jaffe and Soligo, 2007). Since oil and gas reserves are geographically concentrated and technology is available from a growing number of companies, one would also expect SOCs and their governments to capture the bulk of the profits from oil and gas production, a prediction also supported by the empirical evidence (Bindemann, 1999). The profits garnered by many of these SOCs have financed their foreign direct investments (Ramamurti and Singh, 2009).

What is new about this approach and what does it suggest for future research? First, it reminds us that a firm's possession of intangible-based ownership advantages, such as superior technology, is not necessary for multinational expansion. A firm expands abroad when it takes title to the profits that arise from bundling its own inputs with those of local owners in a host market, in other words when it makes these local owners its employees. For this to happen, its contribution must be more difficult to measure than that of its local partners. This implies that multinational expansion can arise from strategies of both intangible exploitation and acquisition. Multinational expansion also results from strategies of forward and backward vertical integration, for example between domestic manufacturing and foreign distribution and domestic distribution and foreign manufacturing. These strategies are not motivated by the exploitation of intangibles and, hence, this motive is only one of the many that drive multinational expansion (Hennart, 1982, 2000, 2010).

Second, the bundling model highlights the rather biased way in which OLI identifies how a firm gains sustainable competitive advantage. As shown earlier, OLI proponents tend to highlight the strategic role played by knowledge-based ownership advantages and to downplay that of all the other resources needed to profitably sell a product or service in a given market. This leads many IB scholars to label emerging market firms *resource poor* (Mathews, 2006a) or *having competitive disadvantages* (Luo and Tung, 2007) because they do not possess advanced technology or world-famous brand names. In contrast, a bundling model encourages us to think about what it takes to profitably sell a product in a market. To do so requires finding out what provides value to customers, orchestrating the efficient delivery of this value through the use of various resources, including technology, and capturing a portion of that value. For this to result in a durable profit stream also requires some isolating mechanisms to protect the firm against imitation. This makes clear that the possession of advanced technology or strong brand names is neither a necessary nor a sufficient condition for operating profitably in a target market. It is not a necessary condition because technology is just one element of the bundle. In fact, many firms in both emerging and developed countries have managed to create and sustain strong market positions using standard technology to deliver superior value to customers. Witness Ryanair

in air transport, Netflix in DVD rentals, Zara in retailing, and Grupo Bimbo in bread and baked goods. It is not a sufficient condition because having valuable intangibles does not guarantee success if the needed local complementary resources cannot be efficiently accessed. A firm that has developed high technology products in its home market will not be successful in a foreign market if it is unable to get the product into the hands of local customers.

Another important implication of the bundling model is that the process of value creation and its apportionment between the cooperating firms is always context specific. This is because the transactional characteristics of both intangibles and complementary local assets and the relative bargaining power of their respective owners are affected by the economic and institutional context and by the firms themselves. Which inputs are strategic is likely to differ across industries. Being able to obtain land in large parcels is crucial in the hypermarket business but not in pharmaceuticals, while the effective level of intellectual property protection is an important factor for the commercialization of new drugs but not for setting up hypermarkets. How difficult it is to transact for these inputs depends, in turn, on the target country institutional environment. While the IB literature has started to investigate the impact of a country's macro-institutional environment, such as its political institutions, on the relative ease with which EMMs and MNEs operate in a given host country (e.g., Cuervo-Cazurra and Genc, 2008), more attention needs to be paid to how micro-level institutions influence the ability of firms to conduct business and garner rents. Consider, for example, the impact of intellectual property protection on the ability of MNEs to exploit their intangibles and fend off local competition. Technological knowledge, like any other input, yields supernormal profits only if it has few substitutes. This is the case when host country governments grant a legal monopoly to patent holders and enforce it. Everything else constant, the bargaining power of foreign technology owners is strongly reduced vis-a-vis local firms if host countries do not grant or fail to enforce intellectual property rights, as has been the case and is still the case in many emerging markets (consider, for example, the role played by the 1970 Indian Patent Act in the development of a native Indian pharmaceutical industry). Macro-international trends are also relevant. As we have seen, the increased codification, digitization, and modularity of technology are increasing the number of potential

technology suppliers and, hence, reducing their bargaining power.

Finally, one of the implications of this article is that MNEs and EMMs are involved in a race to access the resources they lack to complete the bundle. EMMs are seeking to acquire the technology and brand names they need to compete with MNEs, while MNEs seek to access the complementary local factors necessary to exploit their intangibles. Because the outcome of this race is likely to depend on the economic and institutional context, we would expect it to vary across industries and across host countries. In other words, the relative market share of local firms and MNEs in emerging markets should vary across markets and industries. While further research is needed, a pioneering study by Johansson and Leigh (2011) provides preliminary support.

There also seems to be significant differences between firms in their ability to manage access to the missing parts of the bundle. In the Chinese car industry, for example, the early local entrants that joint ventured with Western firms have been much slower in absorbing state-of-the-art technology than later entrants such as Chery and Geely (Feng, 2010). Likewise, some MNEs have been much more successful than others in accessing complementary local resources. Compare, for example, the performance of Nokia and Motorola, and Carrefour and Wal-Mart in China. A key factor in Nokia's better performance seems to have been its willingness to invest in distribution (Ryans, 2010), which is consistent with my argument. Clearly much more research is needed on this issue.

The strategic importance of complementary local assets I have highlighted undoubtedly varies across countries and industries and is affected by host country government policies and firm capabilities. More work is needed to verify that the model applies across all emerging markets. Nonetheless, I hope that by presenting a model of the interaction between MNEs and local firms in emerging markets that explicitly recognizes the role played by complementary local resources, I will stimulate further research on their strategic importance so we can gain a better understanding of the dynamics of the competition between EMMs and MNEs.

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